We claim:

1. In a method of affecting cleaning or chamber process control to remove residues of fluorinated discharges from chamber walls from PECVD during manufacture of a semiconductor or integrated circuit, the improvement of removing said fluorinated discharge residues without opening said chamber and without causing chamber downtime, comprising:

a) maximizing H-atom concentration in a gas mix of a plasma containing H_2 through the use of high rf power and low pressure to obtain an in-situ H_2 plasma; and

b) subjecting a reactor chamber, containing build-up residues from previous chamber treatment with a fluorinated plasma, with the in-situ H_2 plasma from step a) without opening said chamber and without shutting down said chamber to remove said build-up residues of said fluorinated plasma.

2. The method of claim 1 wherein said fluorinated discharge residue is AlF_3.

3. The method of claim 1 wherein said plasma contains a mixture of H_2 and Ar.

4. The method of claim 1 wherein said fluorinated plasma is a mixture of $CF_4 + N_2O$.

5. The method of claim 1 wherein said gas mix of said plasma is a mixture of He/H_2.

6. The method of claim 1 wherein said gas is comprised only of H_2.

7. The process of claim 4-6 wherein said mixture of He/H_2 is first administered at a flow rate and ratio of about 1,000/200 sccm at an rf power of about 750W and a pressure of about 0.8 Torr, and then administered so that the H_2 or Ar/H_2 flow rate is about 500 sccm at an rf power of about 500W at about 0.5 Torr.